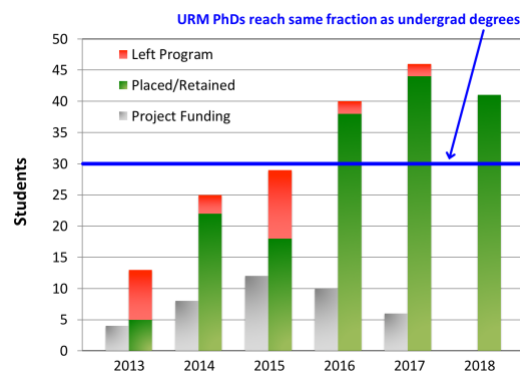


1. INTRODUCTION

Underrepresented minority¹ (URM) students now make up a third of the college-age US citizens, yet they earn less than 10% of US physics Bachelor's degrees and less than 6% of physics PhDs. The American Physical Society Bridge Program (APS-BP) aims to strengthen physics in the United States by increasing the number of underrepresented ethnic and racial minority students who receive doctoral degrees in physics.

With funding from the National Science Foundation, APS-BP is developing sustainable model bridge programs that improve the access to and culture of graduate education for *all* students, with emphasis on those underrepresented in doctoral programs in physics. A significant component of the program also includes developing a national network of doctoral granting institutions to provide substantial mentoring for students to successfully complete PhD programs.

The project has established six bridge sites in Ohio, Florida, and California that provide coursework, research experiences, and substantial mentoring for students who either did not apply to graduate school, or were not admitted through traditional graduate school admissions. Additionally, many physics departments have stepped forward to grant admission to more students than originally anticipated as can be seen in the attached graphic. This substantial magnification of impact is due largely to the centralized recruiting efforts organized by the APS.



More information about the program is available at www.APSBridgeProgram.org.

2. PROGRAM DESCRIPTION

The APS Bridge Program invites your department to consider joining a network of “Partnership Institutions” – institutions that will provide URM students with a smooth transition into graduate programs. The APS Bridge Program (APS-BP) has been very encouraged by the large number of applications we receive each year for the program. Because we are unable to accommodate all students into bridge programs, we have been identifying other departments that are interested in recruiting students into their masters or doctoral programs. In addition, although many students who enter bridge programs ultimately matriculate into the doctoral program at that institution, there is a significant need to have available other institutions that are willing to attract bridge students to their doctoral programs. Since our first priority is to ensure a supportive pairing between student and graduate program, we established Partnership Institutions to vet programs for students, and to help departments committed to the principles underlying the Bridge Program recruit students to their programs.

This document provides guidelines by which institutions can apply to become Partnership Institutions, and criteria we use to select these institutions. The procedure for becoming a Partnership Institution will require institutions to submit a brief proposal detailing programs and practices that support students entering their doctoral program.

3. ELIGIBILITY

The Partnership Institution must be a university or college that offers a Master and/or Doctoral degree in physics and be located and accredited in the United States or Puerto Rico. The institution must have active research programs readily available to students throughout the academic year. Additionally, the

¹ The project defines underrepresented minorities as African American, Hispanic American and Native American.

institution should be an APS-BP Member Institution or in the process of applying to become a Member Institution.

4. BENEFITS

Departments that become Partnership Institutions will be able to take advantage of benefits granted to Member Institutions in addition to the following:

4.1 Unique benefits afforded to Partnership Institutions

- Access to APS-BP Bachelor's and Master's student applicant database (an annual recruitment effort by the APS to identify URM students interested in pursuing doctoral studies in physics)
- Public recognition by the APS Committee on Minorities (COM) of the department's commitment to diversity in physics
- Endorsement of the graduate program to URM students in Bridge Programs and to others who contact APS to inquire about possible recommendations for departments that have supportive post-baccalaureate educational environments
- Featured on APS and APS-BP websites
- Access to individuals in the project and at existing bridge sites who are knowledgeable about support strategies for URM students in graduate studies
- Strengthening Broader Impacts statements in federal grant applications
- Limited travel support for accepted students to attend a professional meeting

5. APPROVAL PROCESS

Partnership Institution applications will be reviewed by the APS Committee on Minorities (COM) and members of the Bridge Program staff. Following a successful review, the Bridge Program and members of COM will conduct either a videoconference review or on-site review of the department.

5.1 Proposal Submission

Institutions that would like to be considered as a Partnership Institution are required to complete an online application and upload their proposal. Proposals will be reviewed on a quarterly basis for approval. **The deadlines for proposals are Friday of the first week in March and September.**

The APS Bridge Program has prepared a Graduate Student [Induction Manual](#) covering a wide array of topics. We strongly encourage you to review this document prior to submission of your proposal and include in your proposal how you have addressed (or plan to address) suggestions from that document.

5.2 Review of Proposals

All members or a subcommittee of COM, depending on the number of proposals, and the APS-BP Project Management will review applications. The following considerations are used in evaluating proposals.

- Engaged & Committed Faculty
 - Active faculty participation is defined as a group that includes a minimum of 10-15% of tenured faculty in physics department. This group must include the chair and/or the Director of Graduate Studies (DGS) or equivalent.
- Mentoring Activities
 - Mentoring and Mentor Training experience
 - Examples of departmental participation in mentor training experiences
 - Examples of previous URM mentoring success
 - In case there has been no previous experience mentoring URMs:

- Outline of a Mentor/Mentee Training Plan that may include
 - Research and professional development programs
 - Ideas on how to identify and recruit students to serve as peer mentors for students brought in from the APS-BP
 - Examples of a Mentor-Mentee compact - a formal agreement that outlines the expectations and responsibilities of the mentor and mentee
- Admissions Practices & Benefits
 - Use of multi-faceted admission criteria that, along with traditional measures of academic preparation, examine a broad range of indicators of a student's potential to conduct original research, and that specifically do not employ strict GRE cutoff metrics.
 - Description of how graduate admission decisions are made and what inputs are considered.
 - Financial support package and health benefits awarded to students.
- Advising & Induction
 - Evaluation and advising procedures for students who are accepted, but lack some key undergraduate preparation (e.g. can students take upper-division undergraduate courses?).
 - Description of how students find an appropriate research advisor.
 - Department procedure for inducting students into graduate student academic and social cultures.
 - Description of department level relocation assistance, housing initiative, student handbook, etc.
 - If applicable, strategies for preparing students for applying to PhD programs (*GRE preparation, application coaching, etc.*).
- Student Progress & Monitoring Procedures
 - Describe how student progress is monitored in the first few semesters
 - Early intervention plans in case student is doing poorly, including tutoring assistance, considerations of add/drop dates, and having students enroll in different level courses
 - Exam structure for reaching candidacy
 - Comprehensive or qualifying exam (*include description of exam, passing rates, policy on retaking*)
 - PhD candidacy exam (*include description of exam, and passing rates if applicable*)
 - Long term progress monitoring plans for students
 - Presence of an Ombudsman or procedure on how grievances are handled
- Data & Demographics
 - Retention rate of all students, and of any underrepresented minority students from admission to graduation.
 - Description of why students left the graduate program in the past five years if known.
 - Number of students (total and URM):
 - Applicants who applied in the previous year
 - Students who were accepted into the program
 - Students who are currently enrolled
- Equity and Inclusion (**NEW**)
 - Description of how your department is actively working towards diversity, equity, or inclusion in your proposal, with special attention to highlighting explicitly what components of these efforts are focused on race and ethnicity.
 - Example evidence:
 - A department that committed to taking an intensive mentor training program that included a significant diversity element
 - A department that attended the Bridge Program conference and was spurred on to improve.

- A department that noted explicit alignment with their university president’s statements around equity
- A department that noted a longstanding commitment to racial equity, including work in diversifying their faculty
- A department who noticed that first year grad students got “lost” and developed an extensive plan to ameliorate this issue

5.3 Review by APS Committee on Minorities (COM)

COM members will review all submissions. Possible outcomes from the panel review are as follows:

1. Approved
 - Full approval: Comments and suggestions from the panel review will be made available.
 - Provisional approval: Proposals can be provisionally approved pending submission of a supplement that discusses concerns raised in the panel review. The response will be reviewed by project management and/or COM, as appropriate.
2. Denied
 - Proposals with significant issues will be contacted to help them address these concerns, and encouraged to resubmit as appropriate.

5.4 Videoconference with Graduate Program, PMT, and COM

Once the proposal has been reviewed and the committee has made a decision to move forward with the process, the project will schedule a 2.5-hour videoconference with the review committee to gather more information and establish a personal link with the institution’s leadership. A videoconference will include the following:

- Institution liaison (if not the chair or DGS)
- Chair of the department and the Director of Graduate Studies
- A selection of graduate students

The videoconference provides the institution an opportunity to discuss specific efforts that support minority students. Details of how this is organized will be provided in advance. In cases where the project has already conducted an in-person site visit this step can be waived.

5.5 Report Prepared and Approval Issued

After review as described above, the BP Management Team and COM will recommend the institution receive approval and begin receiving Partnership Institution benefits. The team will also provide a brief evaluative feedback report to the department where appropriate, to outline specific actions they might consider to further improve their support for students.

5.6 Site Visit by PMT and COM members

Site visits will be conducted to institutions that admit students that have been recruited by the APS Bridge Program. The main goals of the visits are to build relationships with faculty and students, understand the program’s components, and visit with students recruited by the institution. Visits will also provide a chance to inform faculty and students of the APS-BP and other related efforts (New Faculty Workshop, PhysTEC, National Mentoring Community, CUWiP, etc.). The visiting team members will also learn about research activities and their perspectives on diversity as well as how APS may help in their efforts. Although our intention is to visit all institutions that accept students, time constraints may limit or delay the implementation of this activity for some departments.

6. CONTINUING AS A PARTNERSHIP INSTITUTION

The following are expectations for continuing as a recognized Partnership Institution:

1. Complete an annual survey on institutional diversity efforts and demographics
2. Identify and recruit students to serve as peer mentors to students brought in by the APS-BP
3. Participate in collaborative discussions with other Partnership Institutions and the APS-BP on practices that improve all programs
4. Engage faculty / staff / students both internally and externally in discussions that improve the access to and culture of graduate education for all students
5. Inform APS-BP of all offers and student acceptances from the APS-BP application pool
6. Work with APS-BP to track student progress
7. Renewal of certification should be completed every 5 years or with the change of the DGS, whichever happens first.

For institutions that accept Bridge Students, we will require ongoing communication with the local site leader for periodic updates on student progress. Where possible, we may ask the institution to provide information on students that participated in programs created for students from the APS-BP applicant pool, but were independently recruited, for comparison reasons. This will be done with appropriate permissions and precautions.

More details about the APS Bridge Program are available on www.APSBridgeProgram.org. Project management encourages inquiries and consultation during the proposal writing process. Inquiries can be directed to Monica Plisch (301-209-3273, Plisch@aps.org) or Erika Brown (301-209-3248, Brown@aps.org).